



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,168	09/08/2003	John A. Knoch	03-0485 81578	5690

7590 09/22/2005

Leo J. Peters
LSI Logic Corporation
1551 McCarthy Blvd., MS D-106
Milpitas, CA 95035

EXAMINER

KHUU, HIEN DIEU THI

ART UNIT PAPER NUMBER

2863

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,168	KNOCH ET AL.	
	Examiner	Art Unit	
	Cindy D. Khuu	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11-16 is/are rejected.
- 7) ☒ Claim(s) 7-10 and 17-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/8/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings Objection

FIG._1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 12-16 are objected to because of what appears to be a typographical error. It would appear that the dependencies for claims 12-16 are as followed:

- "12. The computer program product of Claim 7" should be "12. The computer program product of Claim 11".
- "13. The computer program product of Claim 7" should be "13. The computer program product of Claim 11".
- "14. The computer program product of Claim 9" should be "14. The computer program product of Claim 13".
- "15. The computer program product of Claim 9" should be "15. The computer program product of Claim 13".
- "16. The computer program product of Claim 11" should be "16. The computer program product of Claim 15".

The examination and art rejections below treat claims 12-16 as though the dependencies are claims 11, 11, 13, 13 and 15 respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 and 11-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Dor et al. (US 6701259)

With respect to claims 1 and 11, Dor discloses a computer program and a method of qualifying a process tool comprising steps of: (a) finding a plurality of pre-scan defect locations on a surface of a semiconductor wafer (Fig. 2, ID 206; Column 6: Lines 25-26); (b) subjecting the semiconductor wafer to processing by a process tool (Fig. 1, ID 102); (c) finding a plurality of post-scan defect locations on the surface of the semiconductor wafer (Fig. 2, ID 100; Column 15: Lines 18-20); and (d) calculating defect locations added by the process tool from the pre-scan defect locations and the post-scan defect locations (Fig. 2, ID 100; Column 13: Lines 51-54).

With respect to claims 2 and 12, Dor further discloses a computer program and a method of displaying a map of the defect locations added by the process tool (Fig. 7, ID 713; Column 15: Lines 18-20).

With respect to claims 3 and 13, Dor further discloses a computer program and a method of displaying a scatter plot of a point representative of a total number of added defects versus a corresponding semiconductor wafer (Fig. 7, ID 704).

Art Unit: 2863

With respect to claims 4 and 14, Dor further discloses a computer program and a method of displaying a selected failure threshold (excursion limit) on the scatter plot (Table 5, Fig 5, ID 532).

With respect to claims 5-6 and 15-16, Dor further discloses a computer program and a method of selecting the point on the scatter plot to initiate a display of one of a pre-test wafer map, of the corresponding semiconductor wafer (Fig. 7, ID 704, 713 and 742; Display map of selected wafer, the total defects and the particular defect number).

Allowable Subject Matter

Claims 7-10 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, taken alone or in combination, fails to disclose or render obvious, which makes the following claim allowable over the prior art:

With respect to claims 7 and 17, Dor further discloses a computer program and a method wherein step (d) comprises comparing a distance between a first point corresponding to a defect location in a first list of pre-test defect locations and a second point corresponding to a defect location in a second list of post-test defect locations with a registration tolerance.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2863

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Phan et al. (6,559,457), Steffan et al. (US 6,238,940), Simmons (US 2004/0054432), Kirsch et al. (6,507,933), Steffan et al. (6,468,815), Lin et al. (6,205,239), and Ishikawa (6,185,322)

Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy D. Khuu whose telephone number is (571) 272-8585. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CHL 9/20/05

Michael Nghiem
MICHAEL NGHIEM
PRIMARY EXAMINER